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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/766,635	01/28/2004	C. Brent Dane	MICI 1002-3	3746

22470 7590 07/10/2006

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EXAMINER

NGUYEN, DUNG T

ART UNIT	PAPER NUMBER
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2828

DATE MAILED: 07/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/766,635

Applicant(s)

DANE ET AL.

Examiner

Dung (Michael) T. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 April 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 and 42 is/are pending in the application.
- 4a) Of the above claim(s) 33-41 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-13, 15-19, 21-32 and 42 is/are allowed.
- 6) ☒ Claim(s) 14 and 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 January 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 04/22/06, 05/26/04, 05/25/05, 01/17/06
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION***Election/Restrictions***

Applicant's election of Group I (claims 1-32 and 42) in the reply filed on 04/19/06 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: reference number 129 in paragraph 0038 and reference numbers 230 & 231 in paragraph 0049. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

Claim 20 is objected to because of the following informalities: line 5, "the gain medium" should be "a gain medium". Appropriate correction is required.

Claim 42 is objected to because of the following informalities: line 7, “juoles” should be “joules”. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 20 is rejected under 35 U.S.C. 102(b) as being anticipated by Dane et al.

(Design an Operation of a 150 W Near Diffraction-Limited Laser Amplifier with SBS Wavefront Correction in IEEE Journal of Quantum Electronics, Vol. 31, No. 1, January 1995). Fig.1 shows a stimulated Brillouin scattering SBS phase conjugate mirror system, comprising:

a phase conjugator comprising a first SBS cell (amplifier) and a focused SBS cell (oscillator) in a beam line, having an SBS focal point inside the focused SBS cell (Section B of page 154);

a relay telescope having a telescope focal point, optically coupled with the phase conjugator, which relays images of an output of the gain medium between an image location on the beam line and an image location near the phase conjugator; and

a baffle at the telescope focal point which blocks off angle beams (as for the claimed functional limitations of “which relays images of an output of the gain medium between an image location on the beam line and an image location near the phase

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conjugator” and “blocks off angle beams”, although the reference is silent about such limitations, it would have been obvious that the relay telescope and the baffle of the reference would inherently possess the same functions as claimed, absent evident to the contrary.).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dane et al. (Design an Operation of a 150 W Near Diffraction-Limited Laser Amplifier with SBS Wavefront Correction in IEEE Journal of Quantum Electronics, Vol. 31, No. 1, January 1995) in view of Crofts et al. (Experimental and theoretical investigation of two-cell stimulated-Brillouin-scattering systems, J.Opt. Soc. Am. B/Vol.8, No.11/November 1991). Dane et al. disclose all limitations of the claim except for the a beam splitter between the first SBS cell and the relay telescope, directing a fraction of the beam to an alternate beam path having an alternate path focal point; and an alignment detector at the alternate path focal point.

Crofts et al. teach in Fig.2 (left side) a beam splitter directing a fraction of the beam to an alternate beam path having an alternate path focal point and an alignment detector at the alternate path focal point.

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It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Dane et al. what is taught by Crofts et al. in order to monitor the laser beam and make any necessary adjustments of the laser medium based on the monitored laser beam.

Allowable Subject Matter

Claims 1-13, 15-19, 21-32 and 42 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

Dane et al. and Crofts et al. disclose all limitations of claims 1, 15, 21, 26, and 42 except for **an adjustable attenuator in the beam line between the collimated SBS cell and the focused SBS cell and at least one of the first SBS cell and the focused SBS cell have an SBS medium comprising a compound having a negative non-linear index of refraction with absolute value of less than about 1×10^{-12} esu.**

Claims 2-13, 16-19, 22-25, and 27-32 are found allowable due to their dependency on the above claims.

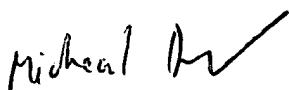
Communication Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung (Michael) T Nguyen whose telephone number is (571) 272-1949. The examiner can normally be reached on 8:30 - 17:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Min Harvey can be reached on (571) 272-1835. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-3329.

A handwritten signature in black ink, appearing to read "Michael" followed by a stylized surname and a checkmark-like flourish.

Michael Dung Nguyen

06/19/06